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EXAMINER

KURTZ, BENJAMIN M

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/665,948

Applicant(s)

TANNER ET AL.

Examiner

Benjamin Kurtz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 42-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-72 is/are rejected.
- 7) ☒ Claim(s) 61 and 62 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 61 is objected to because of the following informalities: The current claim 61 is labeled as (previously presented) in the currently amended claims. However, the originally presented claim 61 differs from the current claim 61. Also the current claim 61 is identical to the current claim 62. Appropriate correction is required. For examination purposes the originally filed claim 61 is taken to be the claimed limitation.
2. Claim 62 is objected to because of the following informalities: In the second line of the claim there is a grammatical error, it is assumed that it reads "...said outside surface of said first housing..." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 69 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 69 recites the limitation "the water device" in the new amended section. There is insufficient antecedent basis for this limitation in the claim. For examination purposes the water device is assumed to be the water treatment device.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 42-43, 46, 48-50, 53, 55, 57-58, 60-65, 69-70 and 72 are rejected under 35 U.S.C. 102(b) as being anticipated by Reid et al. U.S. Patent No. 5,591,332.

Regarding claim 42, Reid (332) discloses a water treatment cartridge (60) capable of sealingly and releasably engaging a water treatment device (12), the cartridge (60) comprising: a housing (122), an inlet (136), an outlet port (140), and a treatment media (128), the media in fluid communication with the inlet (136) and the outlet port (140), a first tube (132) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (threads), a second tube (134) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (by o-ring 33) (fig. 1-3) the first tube (132) extends from the housing (122) and surrounds the outlet port (140), a portion of the first tube (132) surrounds the second tube (134) such that a gap is formed between the tubes such that water is prevented from flowing into the gap (fig. 1-3).

Regarding claims 43 and 46, the sealing surface of the second tube (134) is coplanar with a sealing surface of the first tube (132), and the first (132) and second (134) tubes are without o-rings (fig. 2-3)

Regarding claim 48, the second tube (134) extends from the first tube (132) and the first tube (132) extends from the housing (122) (fig. 2-3).

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Regarding claim 49, a portion of the outside surface of the second tube (134) is a cam surface (fig. 3-4). The upper outer surface (141) of the tube (134) acts as a cam surface for engaging the valve piston (18) that acts to open and close the valve.

Regarding claim 50, Reid (332) discloses a water treatment cartridge (60) capable of sealingly and releasably engaging a water treatment device (12), the cartridge (60) comprising: a housing (122), an inlet (136), an outlet port (140), and a treatment media (128), the media in fluid communication with the inlet (136) and the outlet port (140), a first tube (134) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (by o-ring 33), a second tube (132) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (threads) (fig. 1-3) the first tube (134) extends outwardly for the housing (122) and surrounds the outlet port (140) and the second tube (132) surrounds at least a portion of the first tube (134) forming a gap enclosed between the first (134) and second (132) tubes wherein no water flows into the gap (fig. 1-3).

Regarding claim 53, the first (134) and second (132) tubes are without o-rings (fig. 2-3).

Regarding claim 55, a portion of the outside surface of the second tube (132) is a cam surface (fig. 3). The upper outer surface acts as a cam surface for engaging the lever (114).

Regarding claim 57, Reid (332) discloses a water treatment cartridge (60) capable of sealingly and releasably engaging a water treatment device (12), the cartridge (60) comprising: a housing (122), an inlet (136), an outlet port (140), and a

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treatment media (128), the media in fluid communication with the inlet (136) and the outlet port (140), a first tube (132) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (threads), a second tube (134) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (by o-ring 33) (fig. 1-3) the first tube (132) extends from the housing (122) and surrounds the outlet port (140), a portion of the first tube (132) surrounds the second tube (134) such that a gap is formed between the tubes such that water is prevented from flowing into the gap when the cartridge (60) is engaged to a water treatment device (fig. 1-3).

Regarding claim 58, the first (132) and second (134) tubes are without o-rings (fig. 2-3).

Regarding claim 60, Reid (332) discloses a water treatment device (12) that sealingly and releasably engages a water treatment cartridge (60) the water treatment device comprising: a first housing (14) surrounding an outlet (140) such that a treated water outlet (140) passageway is formed, the housing (14) comprising an inside and outside surface, and at least one sealing surface (33) (fig. 2-3), a second housing (58) comprising an inside and outside surface and at least one sealing surface (threads) (fig. 2-3), at least a portion of the second housing (58) surrounds a portion of the first housing (14) wherein a gap is formed in the area between the outside surface of the first housing (14) and the inside surface of the second housing (58) and the sealing surfaces of the first (14) and second (58) housings such that water does not flow into the gap (fig. 2-3).

Regarding claim 61, the area between the outside surface of the first housing (14) and the inside surface of the second housing (58) does not function as an untreated water inlet passageway (fig. 2-3).

Regarding claim 62, the area between the outside surface of the first housing (14) and the inside surface of the second housing (58) functions as an air vent (fig. 1, 3). Hole (68) acts as an air vent for the gap (fig. 1).

Regarding claim 63 and 64, the water treatment device (12) further comprises a pressure vessel (122), wherein the pressure vessel (122) is sealingly fitted to the water treatment device (12) such that that pressure vessel (122) is in untreated fluid communication with the first housing (14) but not in untreated fluid communication with the second housing (58) (fig. 2), and the pressure vessel (122) is threadably fitted to the device (12) (fig. 2).

Regarding claim 65, the first housing (14) is a tube and the second housing is a tube (fig. 1-2).

Regarding claim 69, Reid (332) discloses a water treatment device (12) that sealingly and releasably engages a water treatment cartridge (60), the cartridge (60) comprising a first tube (134) and a second tube (132), the water treatment device (12) comprising: an outlet housing (14) sealingly engaging the first tube (134) of the cartridge (60), the outlet housing (14) comprising an inside surface and an outside surface and at least one sealing surface (o-ring 33) (fig. 2-3), a vent housing (58) sealingly engaging the second tube (132) of the cartridge (60), the vent housing (58) comprising an inside and outside surface and at least one sealing surface (threads) (fig.

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2-3). A portion of the inside surface of the outlet housing (14) forms and defines a treated water outlet passageway, wherein a portion of the outside surface of the outlet housing (14) and a portion of the inside surface of the vent housing (58) form and define an air vent and a portion of the vent housing (58) surrounds a portion of the outlet housing (14) (fig. 1-3). When the water treatment device is sealingly engaged to a water treatment cartridge a gap is enclosed and sealed between the sealed engagement of the outlet housing (14) and a first tube of the cartridge and the sealed engagement of the vent housing (58) and a second tube of the cartridge (fig. 2-3).

Regarding claim 70, Reid (332) discloses a water treatment system comprising: a water treatment cartridge (60) capable of sealingly and releasably engaging a water treatment device (12), the cartridge (60) comprising: a housing (122), an inlet (136), an outlet port (140), and a treatment media (128), the media in fluid communication with the inlet (136) and the outlet port (140), a first tube (134) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (by o-ring 33), a second tube (132) comprising an inside and outside surface, a proximal and distal end and the outside surface is a sealing surface (threads) (fig. 1-3) the first tube (134) extends outwardly for the housing (122) and surrounds the outlet port (140) and the second tube (132) surrounds at least a portion of the first tube (134) (fig. 2-3), a water treatment device (12) for sealingly and releasably engaging the cartridge (60), the device (12) comprising: an outlet housing (14) having an inside and outside surface and a sealing surface (o-ring 33 and 31), a vent housing (58) having an inside and outside surface and a sealing surface (threads) (fig. 2-3), wherein a portion of the inside



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surface of the outlet housing (14) forms and defines a treated water outlet passageway, and a portion of the outside surface of the outlet housing and a portion of the inside surface of the vent housing (58) forms and defines an air vent (fig. 2-3). The first tube (134) sealingly engages the outlet housing (14) to form a first seal and the second tube (132) sealingly engages the vent housing (58) to form a second seal such that the inside surface of the first tube (134) and the inside surface of the outlet housing (14) are in fluid communication and such that the outside surface of the first tube (134) and the inside surface of the vent housing (58) are in fluid communication wherein a gap is enclosed between the first and second seals and does not permit a liquid to flow into the gap (fig. 1-3).

Regarding claim 72, at least one sealing engagement (threading) of the second tube (132) and the vent housing (58) occurs distal to at least one sealing engagement (with o-ring 33) of the first tube (134) and the outlet housing (14) relative to the water treatment cartridge housing (122).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 44-45, 51, 67-68 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (332) in view of Gundrum U.S. Patent No. 5,891,334.

Regarding claim 44, Reid (332) discloses a portion of the inside surface of the second tube (134) is a sealing surface (by o-ring 36) (fig. 4) but does not disclose the inside surface of the first tube (132) having a sealing surface. Gundrum (334) teaches a first tube (27) with a portion of the inside surface of the tube (27) is a sealing surface (threads) (fig. 1-2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the inside sealing surface of Gundrum (334) in the cartridge of Reid because the sealing surface allows the housing to be demountably and sealably attached to the end cap (col. 3, lines 4-5).

Regarding claim 45, Reid (332) discloses the water treatment cartridge but does not disclose the distal end of the first tube (132) extending from the cartridge a greater distance than the distal end of the second tube (134). Gundrum (334) teaches a first tube (27) extending a greater distance from a cartridge (10,11) than a second tube (33) (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the longer tube of Gundrum (334) with the cartridge of Reid (332) because the longer tube provides more threads and therefore a tighter more secure engagement.

Regarding claim 51, Reid (332) discloses a portion of the inside surface of the first tube (134) is a sealing surface (by o-ring 36) (fig. 4) but does not disclose the inside surface of the second tube (132) having a sealing surface. Gundrum (334) teaches a second tube (27) with a portion of the inside surface of the tube (27) is a sealing surface (threads) (fig. 1-2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the inside sealing surface of Gundrum (334) in

the cartridge of Reid because the sealing surface allows the housing to be demountably and sealably attached to an end cap (col. 3, lines 4-5).

Regarding claim 67 and 68, Reid (332) discloses the outside surface of the first housing (14) is a sealing surface (at o-ring 31) but does not disclose the outside surface of the second housing (28) being a sealing surface. Gundrum (334) teaches a second housing (28) whose outside surface is a sealing surface (threads and o-ring 43) (fig. 1-2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the second housing of Gundrum (334) in the device of Reid (332) because the sealing surface allows a cartridge housing to be demountably and sealably attached to an end cap (col. 3, lines 4-5) and o-rings are commonly known in the art as providing fluid tight seals.

Regarding claim 71, Reid (332) discloses the water treatment system wherein one sealing surface of the outlet housing (14) is an o-ring (31) oriented around the outside surface of the outlet housing (14) but does not disclose the vent housing having an o-ring. Gundrum (334) teaches a housing (28) with a sealing surface of an o-ring (43) oriented around the outside surface of the housing (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the o-ring of Gundrum (334) in the system of Reid (332) because it is well known in the art that an o-ring provides a fluid tight seal.

6. Claims 52 and 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (332) in view of Reid U.S. Patent No. 6,274,038.

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Regarding claim 52, Reid (332) discloses the water treatment cartridge but does not disclose the most distal sealing surface of the first tube extends a greater distance than the sealing surface of the second tube (fig. 2). Reid (038) teaches a water treatment cartridge where a first tube (26) extends from the cartridge a greater distance than the sealing surface of a second tube (20) (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the tube dimensions of Reid (038) in the cartridge of Reid (332) because the threading urges the cartridge further into sealing relationship with the head (col. 3, lines 3-5).

Regarding claim 56, Reid (332) discloses the water treatment cartridge but does not disclose that the treatment media comprises a radial flow carbon block. Reid (038) discloses a cartridge (80) that includes a treatment media (75) comprising a radial flow carbon block (fig. 1, col. 3, line 66 – col. 4, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the filter media as taught by Reid (038) with the cartridge as taught by Reid (334). The carbon block reduces the concentration of volatile organic contaminants, chemicals, parasites, sediment, biocide, and consequent suspended and dissolved materials including killed microorganisms and pathogens (col. 3, line 66 – col. 4, line 5).

7. Claims 47, 54, 59 and 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reid (332).

Regarding to claim 47, Reid (332) discloses the cartridge but does not disclose the diameter of the inside surface of the second tube or the diameter of the outside surface of the first tube. It would have been obvious to one of ordinary skill in the art at

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the time the invention was made to modify the cartridge as taught by Reid (332) to have the inside surface of the second tube be a diameter of 1-5cm and to have the outside surface of the first tube be a diameter of 0.5-3cm. The cartridge as taught by Reid (332) has the first tube surrounding the second tube, thus the first tube protects the sealing surface of the second tube from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface of the second tube. Although it is possible for the cartridge, as taught by Reid (332), to have diameters that fall within the specified range, the primary function of protecting the sealing surface is fulfilled.

Regarding to claim 54, Reid (332) discloses the cartridge but does not disclose the diameter of the inside surface of the second tube or the diameter of the outside surface of the first tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Reid (332) to have the inside surface of the second tube be a diameter of 1-5cm and to have the outside surface of the first tube be a diameter of 0.5-3cm. The cartridge as taught by Reid (332) has the first tube surrounding the second tube, thus the first tube protects the sealing surface of the second tube from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface of the second tube. Although it is possible for the cartridge, as taught by Reid (332), to have diameters that fall within the specified range, the primary function of protecting the sealing surface is fulfilled.

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Regarding to claim 59, Reid (332) discloses the cartridge but does not disclose the diameter of the inside surface of the second tube or the diameter of the outside surface of the first tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Reid (332) to have the inside surface of the second tube be a diameter of 1-5cm and to have the outside surface of the first tube be a diameter of 0.5-3cm. The cartridge as taught by Reid (332) has the first tube surrounding the second tube, thus the first tube protects the sealing surface of the second tube from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface of the second tube. Although it is possible for the cartridge, as taught by Reid (332), to have diameters that fall within the specified range, the primary function of protecting the sealing surface is fulfilled.

Regarding claim 66, Reid (332) discloses the water treatment device where the first (14) and second (58) housings are concentric but does not disclose the first housing extending a greater distance than the second housing. It would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to extend the first housing at any distance farther than the second housing so long as a proper seal can be maintained between the device and a cartridge.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 42-72 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bk 4/18/2006

  
JOHN S. KIM  
PRIMARY EXAMINER